SECURITIES AS A MEANS OF PAYMENT.

Among the most important instruments of modern commerce, coming next to banking credits in their usefulness as a medium of exchange, are negotiable securities. They give a transferability to investments in large enterprises which could not well be given by any other form of credit. The term "negotiable securities" is applicable in a general sense to many forms of commercial paper, including drafts and bills of exchange, but is usually employed for the share-capital of corporations and for the bonds of such corporations and of local and state governments. It is in this sense that the term is here used. Such negotiable securities are chiefly those which are quoted upon the stock exchanges and are the subject of stock exchange transactions, but securities exist which, either from the small number of transactions when they are of a high character or from the absence of sufficient character to secure recognition, are not regularly quoted upon the exchanges. The negotiable securities most useful as a medium of exchange, auxiliary to money and banking credits, are the bonds of cities and states and the stocks and bonds of manufacturing and transportation companies. The shares of important banks are dealt in to some extent upon the exchanges, but the public policy of most states has hedged such shares with restrictions which are not thrown around other classes of securities. The shares of the Bank of France, for instance, are not permitted to be transferred to bearer,* but the name of the holder must be registered at the office of the bank. In England the law prohibits trading in bank shares on credit. The shares must be in the possession of the seller,

* Guyot and Raffalovich, "*Dictionnaire du Commerce*," Article "Actions," I, p. 56

and he cannot sell for future delivery, however clearly he may anticipate a fall.* The national banks of the United States are forbidden to deal in each other's shares and their shares are seldom the subject of speculation upon the exchanges.

Negotiable securities which are quoted upon the exchanges rank next to banking credits as a medium of exchange because they are more readily convertible into money or credits than any specific commodity. All commodities are in a broad sense the equivalent of money in their command over other commodities. The difference between money and commodities is that money is a general commodity, so acceptable to all men for its exchange value that it is not seriously subject to the discriminations of individual taste, while any other commodity finds only a limited market among those who desire it for consumption. From the special object, like a pair of shoes made to order for a single individual, there is a gradual gradation of exchangeability until the articles are reached which are the subject of operations upon the international exchanges. Negotiable securities command money in the sense that they are not themselves specific commodities of limited consumption, but are titles to the earnings of corporations or pledges for periodical payments of specific sums of money in the form of dividends or interest. They come nearer than any other article to performing the function of money, in commanding all commodities, because they are desired for their power to earn money rather than for their power to satisfy any special want. It is proposed to devote this article chiefly to the discussion of the part played as a medium of exchange by negotiable securities which are quoted upon the stock exchanges. Such securities should not be separated, however, by an arbitrary line in the mind

* While this is the provision of the law (Leeman's Act), a witness before a Parliamentary Committee declared that it was never regarded, and that if any member of the Stock Exchange were to plead the Act in bar of any bargain he would be put out.—"The Rationale of Market Fluctuations," p. 30.

of the student from commodities which command money, and especially those articles which are sold by samples or by fixed standards upon the exchanges and which are often the subject of speculative dealing, without actual delivery. These articles are really sold by title in many cases, without the expectation of delivery, and it is these titles or orders for delivery which approximate most closely to negotiable securities, which are themselves the titles to indivisible parts of manufacturing plants, railways and steamships, or are simply the titles of the general indebtedness of states and corporations.

The employment of credit and the extension of commercial operations have created two great classes of markets for transactions which do not involve the selection of particular commodities. A general term, the *Bourse*, is applied on the European continent to both these classes of markets—those where negotiable securities and those where certain classes of merchandise, like cotton and wheat, are the object of operations. Both of these markets approximate in some degree to the money market or the market for available capital, but the market for negotiable securities approximates more nearly to the money market than do the produce exchanges. The reason for assimilating the produce exchanges to the stock exchanges and the money market is the fact that the articles dealt in are of general transferability by classes. The purchaser of a bale of cotton or a bushel of wheat on the international exchanges does not make personal inspection of a particular lot, but only requires the knowledge, if he accepts delivery at all, that the lot conforms to recognized standards. These standards are fixed by samples, and a bale of cotton or a bushel of wheat of a given grade are the same in all the international markets. * They are used as substitutes for money through

* "The merchandise of the Bourse, aside from securities, consists preferably of things which are easily transportable, meeting general necessities, and of which one considers only the quantity or simply a gradation of value."—Behrend, "*Lehrbuch*," quoted by Sayous, "*Les Bourses Allemandes*," p. 63.

the exchanges in a manner which would not be possible with articles not thus graded.

Stock exchange securities have become in the last half century the most important factor of international exchange and a much more sensitive barometer of the movement of capital and the state of the markets than even discount rates for money. The produce and stock exchanges of the world are the nerve centres upon which converge all the influences which affect the values of commodities and the demand for money and credit. They form a means for obtaining money and credit which is much more economical in many cases than the direct borrowing of gold and which supplements foreign bills of exchange when movements of credit or capital are required which are in excess of the supply of bills. Movements of capital and credit by means of negotiable securities are now possible, which would drain a country of its monetary supply if they were required to be met at once from the stock of the precious metals.

The general effect of the market for negotiable securities is to operate as a leveling force upon prices and the market for capital. Securities act as a series of cushioned buffers for the tremendous shock which would fall upon a modern money market if all the demands upon it had to be met exclusively from commercial bills of exchange and from the money supply of the country. A nation rich in foreign securities or in its own securities, when they are negotiable upon foreign markets, has a reserve for emergencies far superior to an idle stock of gold and silver, because they are earning interest during the entire time for which they are held. When an emergency arises, like a shortage of the food supply at home or a great call by the government for war resources, it is only necessary to sell securities, especially those issued outside the country, in order to obtain credit and capital. An early illustration of this was afforded in the crisis of 1847, when the crops failed in Western Europe and an outflow of gold began from England

and France. The Emperor of Russia came to the aid of the Bank of France by offering to buy French national securities to the amount of 50,000,000 francs. The bank accepted the offer and the securities went to Russia in payment for grain in place of the gold which would otherwise have been exported. A representative of the Bank of France was sent to St. Petersburg to accept the drafts upon the Bank of Russia (then known as the Bank of Commerce) and negotiate them upon favorable terms with those having bills to sell upon Paris. The operation in its essence involved the payment by the Russian bank of its own gold to Russian grain exporters, the bank receiving the French securities in lieu of gold.*

This operation of half a century ago is only the crude type of a system of regulation of international balances by the stock market which has attained a delicacy and perfection of mechanism superior to that of the money market. The produce exchanges and the stock markets reflect by the fractional fluctuations in prices the slightest influences of supply and demand, the acts of nature which affect production, political events which are likely to diminish demand or increase the uncertainty of supply, and even the reaction of these causes acting upon one commodity upon the demand and supply of other commodities. As money permits the measurement of one article against another by price, so that the relative cost of production and utility of any two or more articles can be accurately compared according to a common standard, so the stock market permits the reduction of all these price comparisons to a common unit of measurement for the operations of stock companies.

The stock market affords the most sensitive barometer of the operation of the scientific laws of value. On this market are decided the contests between buyers and sellers,

* *Vide* the interesting account by M. Vernes, the agent of the Bank of France, of his mission and operations.—"*Bulletin Russe de Statistique*," January-March, 1898, V, p. 173.

which result in the settlement of the price of any particular security at just the point of its marginal value in relation to other securities. The level of prices established represents upon the whole all the known facts regarding the value and earning power of any enterprise represented by securities and the average judgment of competent persons regarding its future value and earning power. As the fall in the price of commodities below cost of production is a warning to the producer to diminish his output, so a similar fall in the price of securities of a given class is a warning to their holders that their capital has been unwisely applied and is a warning to the investing community that future investments of capital should be made in other directions. The stock market, therefore, affords a daily test of the usefulness of enterprises to the entire industrial community. Under its operation, useless production which might otherwise be continued in ignorance is arrested, and capital is diverted from paths which afford less utility to those which afford the highest utility to the community.* "It has been seen," says Professor Pareto, "that bargaining was an operation by means of which the market resolved in practice the equations of production; speculation is an operation by which it is sought to reach in the promptest possible way the solution of these equations.†

It is the function of the arbitragist, or broker in international securities, to determine these equations between different communities. The comparative value of a given security differs on a given day in different markets, because of the special demands upon one market or another for money and capital, which may promise a higher or lower

* Von Weiser points out that it is the law of marginal utility which determines the price and that "it is with reference to this valuation that the costs permissible are calculated, that all stocks are inventoried, that all undertakings make up their balance sheets, and that all profit and loss is reckoned." He adds, "If a socialist community were to give up exchange—the payment of buyer to seller—it would not on that account require to give up this measuring scale for the valuation of goods."—"Natural Value," p. 27.

† "*Cours d'Économie Politique*," II, p. 241.

return upon the capital invested if it is turned into cash and applied to some new purpose. This is especially the case when the rental of money becomes high, and explains the brisk selling of securities on European bourses when their comparative value in relation to ready money is impaired by rumors of war and other political events. The value of securities in such an emergency falls greatly in relation to money on the bourses of those countries whose credit is most involved and which may be compelled in case of war to make large demands upon the money market. The equations of exchange then send the securities to markets where they have a higher comparative value and bring money to the market where the need for it is indicated by a high discount rate. As value is the expression of utilities, goods, securities and money alike tend to seek the markets where they possess the highest value, and the proposition of Professor Block is justified, "Speculation succeeds only if it renders a service—when it has foreseen a future need and has satisfied it."*

The movement of securities takes place from one market to another, and especially between international markets—since there is usually but one important market in each country—as the result of the fractional differences in prices which are caused by changes in the money market and in the rates for foreign exchange. A high discount rate in a given market upon short-term loans indicates a scarcity of money and larger profits for the holders of money than for the holders of securities. The holders of securities naturally sell them for money in such a market, which creates an increased offer of securities and a decline in their price. This movement is greatly stimulated by the fact that many securities are carried upon margins. High rates for money diminish or wipe out the profits of speculation, and the usual speculative operations in securities are greatly reduced. Such a condition attracts money from abroad for the pur-

* "*Les Progrès de la Science Économique*," II, p. 14.

chase of securities, because they have become lower in price in the market where high money prevails than in foreign markets.

Securities thus afford a convenient auxiliary to gold and bills of exchange in normal conditions of the market. The fact that they may be transmitted at a trifling cost by mail, or even change ownership on credit through the medium of the great banking houses without actual transmission, makes them more economical in certain states of the exchanges than the precious metals or bills of exchange. Where securities are not shipped directly in payment of obligations, they give rise to bills of exchange by affording the means for taking up the bills in the market where the securities are sold. It is by this method that balances of trade can be settled without heavy movements of the precious metals. Exchange operations and these movements of securities are constantly carried on by the calculation of minute fractions of profit which may be derived from a sale in one market and a purchase in another. How securities may thus be used is set forth by Mr. Giffen as follows:*

"A merchant or banker in London having money to pay in Paris may effect his purpose quite as well by buying in London French *rentes* or some other security negotiable on the Paris Bourse, and then reselling what he has bought in Paris. Instead of sending a bill of exchange to Paris he sends a bond of the French or some other government, or the obligations or shares of a railway company, like the Lombardo-Venetian railway. At times very considerable transactions of this nature do in fact take place. An exchange dealer who wants to send money from one capital to another, when there are no bills to be had, will buy securities in the one and send them to the other. The operation will probably be that he has sold drafts of his own to people who have inquired for them, and he finds the money to meet those drafts by the purchase and transmission of securities."

The question in what form a foreign obligation shall be settled—whether the obligation is an actual debt or a vol-

* "Stock Exchange Securities," p. 92.

untary transfer of capital for the purpose of making loans abroad—turns upon the marginal utility of the various agencies for making the transfer. The normal method is by the sale of bills of exchange which represent merchandise shipments at remunerative prices. If, however, the country has a surplus stock of gold, which can be transferred without affecting the discount rate, the gold is likely to be transferred. In such a case, the surplus gold possesses the smallest marginal utility at home, because it does little more than afford a speculative fund for the purchase of securities. Securities under such conditions reach a high price, and afford a small return to the investor, because of the same excess of capital which depresses the discount rate.* When, however, the point is reached in the export of gold which begins to impair the sufficiency of the tools of exchange, gold becomes of a higher marginal utility than securities. Securities then begin to be sacrificed in order to obtain currency, and their low price, if their character and earning capacity continue good, begins to attract money for their purchase from abroad. It is only when the pressure upon both gold and securities has become such that they cannot longer be employed in balancing the exchanges without greater loss than the reduction in the price of commodities that large changes begin to appear in the volume of merchandise imports and exports. The conditions which at the beginning affect the demand for gold and securities tend also to operate to lower the prices of merchandise, but the gold and the securities are the more sensitive objects of this tendency, because their value is determined to a nicety in organized markets.

Merchandise appears to the holder to possess a higher marginal utility than gold or securities until he realizes that it has ceased to have its old price value. It is only when the pressure for gold becomes intense that its marginal value as a tool of exchange, capable of fulfilling any

* *Vide* Pantaleoni, "Pure Economics," p. 236.

obligation, and especially when credit ceases to be available, rises in a marked degree. The marginal utility of merchandise then declines in a rapid ratio in the mind of the holder and the opinion of the community. This is the condition of an economic crisis, when the inability to obtain credit increases to an unusual degree the demand for the metallic tool of exchange and gives an exceptional value to money. Such a condition is usually temporary, but for the moment the marginal utility of goods changes in a remarkable ratio to the marginal utility of gold, and great sacrifices of goods and securities are made to obtain money, which operate to attract foreign purchasers and increase the volume of merchandise exportations. The demand for money operates at the same time to arrest its shipment abroad in exchange for merchandise and to diminish importations in much the same degree as the increase in exportations. A phenomenon of this sort was witnessed in the United States at the time of the panic of 1893, when an excess of merchandise imports of $18,735,728 for the year ending June 30, 1893, was changed into an excess of merchandise exports of $237,145,950 for the year ending June 30, 1894.

Negotiable securities have been one of the necessary instruments for extending credit to new countries. The older countries, where capital has been accumulated in sufficient amounts to be lent for the development of the undeveloped countries, usually exhibit a great excess of merchandise imports over exports. This excess in Great Britain reached nearly £180,000,000 in the calendar year 1898. The explanation is found in the fact that Great Britain is receiving in commodities the interest upon foreign securities which she holds. British capital has been loaned in the undeveloped countries in the form of exported goods. These loans might conceivably have been compensated by long mercantile credits, but they could hardly

have reached their present magnitude without the issue of negotiable securities. It is the interest upon these securities which is paid by the large balance of imports of merchandise into Great Britain. The stocks and bonds, being negotiable at any time upon the stock exchanges, and their value being ascertained daily by the market quotations, possess an attraction to the general investor far superior to the possession of the personal notes and bills of foreign merchants. Credit would undoubtedly have been extended in a considerable degree to the undeveloped countries from the surplus capital of the old countries by means of mercantile credits if negotiable securities had never been devised, but the invention and wide distribution of securities has greatly increased the volume of such loans by increasing the facility for making them and giving them a determinable value and an exchangeable character upon the markets of the world.

While securities have thus afforded a useful means of exchange in normal conditions of the market, and a means for giving the use of the surplus capital of the old countries to the new, it is in the settlement of great balances under abnormal conditions that they have performed the most conspicuous services in modern finance. They have afforded a means for making transfers of capital in great masses in response to comparatively small fluctuations in price, which could not have been made by commodities and the precious metals alone without an economic convulsion. There have been acute panics in connection with the transfer of securities, and such transfers have withdrawn capital from a country whose financial or economic system had become subject to distrust which might not have been withdrawn if it could have been obtained only by the sale of commodities or the delivery of the precious metals. There can be no doubt, however, that upon the whole the existence of securities has diminished the fluctuations in the

prices of commodities, and has mitigated the severity of the strain which would otherwise have been felt by the country from which capital has been withdrawn.

The operation of the withdrawal of capital by a lending country from a debtor country by means of securities, involves the sale of the securities upon the exchanges of the lending country and their purchase upon the exchanges of the borrowing country. This is effected by the slightly higher rates which prevail in the country where the securities are issued and by the willingness of far-sighted observers of the market to take the securities at low prices. The economic effect of the operation is that the country issuing the securities is compelled to export its merchandise and receive back securities in payment, instead of receiving the commodities of the creditor country. As these commodities are not only consumptive articles, but machinery and raw materials, the result of a large operation of this kind is to diminish the resources and the means of production of the country compelled to buy back its own securities. The process of buying back securities may take place under widely different conditions. It may, when it is the result of distrust and financial depression, put a severe strain upon the resources of the country taking back its securities. The process may, on the other hand, when it is the result of a great surplus of capital, afford evidence of the increased resources of the buying country and strengthen its future position by diminishing its dependence upon foreign capital.

The United States has passed through both these stages in the purchase of their own securities within a few years. In 1890 the fear that the country would go to the silver standard caused increased sales of American securities in London after the Baring failure. The withdrawal of foreign capital was masked or retarded for a time by the failure of the European crops, which afforded a large market at good prices for American food products, and by

the exportation of gold, which resulted in a net loss of gold to the United States of $68,130,087 in the fiscal year ending June 30, 1891, $495,873 in 1892, and $87,506,463 in 1893. It was in the latter year that the special demand for American food products and the export of gold ceased any longer to cover the sale of American securities abroad. The effect of the withdrawal of foreign capital was felt in the paralysis of production and the arrest of exchange. One of the results of poverty is diminished purchases. This result was shown in a striking manner in the foreign trade of the United States by the decline of imports of merchandise from $866,400,922 for the fiscal year ending June 30, 1893, to $654,994,622 for 1894. The fall of prices as the result of overproduction and the close calculation of profits stimulated exports until the excess of merchandise exports over imports reached $148,789,307 for the calendar year 1894, $23,190,789 for 1895, $324,257,685 for 1896, $357,113,816 for 1897, and $620,536,129 for 1898.

But the motives and character of American purchases of securities abroad became radically changed as the effects of the panic wore off. The purchases came by degrees to be made from the surplus of saved capital in the United States, resulting from improved conditions of production, rather than made from necessity at the expense of crippling the domestic machinery. Business activity was renewed in 1897 and 1898, and prices of American securities rose rapidly in 1898 upon the American stock exchanges. Large purchases of such securities were made from the surplus capital of the United States at prices slightly higher than foreign capitalists were willing to pay. The large merchandise balance in favor of the United States was compensated partly by the importation of gold, but very largely by the return of securities. The movements of securities are not the subject of official record and usually escape accurate observation, but it was estimated in the summer of 1899 that the movement for eighteen months brought in American securi-

ties to the amount of $375,000,000.* The United States thus, by bidding from their surplus a trifle higher for their own securities than they were valued on foreign exchanges, wiped out a large part of their indebtedness abroad and fortified their financial independence.

The most striking historical instance of the influence of securities upon a great transfer of capital was the payment of the indemnity by France to Germany after the Franco-Prussian war. The operation was carried out by the issue of two great loans by the French government which realized 2,225,994,046 francs and 3,498,744,639 francs, respectively, and by the transfer of the necessary part of the proceeds to the German treasury. This transfer of funds was made chiefly by bills of exchange, the amount thus paid being 4,248,326,374 francs out of total payments of 5,315,758,853 francs ($1,025,000,000). It was quite evident, however, that the exchange market afforded only the mechanism, and not the means, for this great transfer of capital. The purchases of bills of exchange were somewhat too rapid at first, with the result of raising the price of foreign bills and increasing the cost of the operation to the French treasury. The reason was well defined by Léon Say, one of the greatest of French ministers of finance:†

"Exchange is a matter of speculation, and most of the bankers who furnished it to the treasury sold their own bills, with a view to replacing them by later purchases. The market was not organized immediately upon the scale which was required and there was at the beginning a sort of pressure which raised quotations. In the second place, the sellers of exchange were obliged to liquidate their operations by exportations when they did not have bills arising from previous exportations, and one of the objects fitted for exportation at all times and under all circumstances is cash."

* Leading banking houses estimated the movement from January 1 to February 10, 1899, at about $60,000,000.—"New York Journal of Commerce," February 11, 1899. Later inquiries put the average of seven estimates of the movement of American securities from abroad back to the United States, from January 1, 1898, to early in June, 1899, at $375,000,000.—"New York Journal of Commerce," June 13, 1899.

† "*Les Finances de la France sous la Troisième République*," I, p. 406.

It required the pressure of the exchange quotations upon the market for securities to produce the movement which permitted the transfer of such a volume of capital from France to Germany without an economic convulsion. The French people came forward with patriotic enthusiasm to subscribe for the national loans, and in doing so diverted large masses of French capital from investment in foreign securities, depressed their prices on the Paris market, and invited purchases of such securities in London, Berlin, Frankfort and Vienna. Foreign obligations were exported from France in great quantities and the interest coupons of those which remained added to the resources for exchange in transferring credits from Paris to Berlin. The exact movement of securities cannot be determined from statistical sources, but was indicated in some degree by the decline in their quotations on the Paris market and by the diminished amount of the coupons of certain foreign obligations paid at Paris. Thus, the payments made on the coupons of the Italian debt were 85,000,000 francs in 1868 and only 60,000,000 francs in 1873. The difference of 25,000,000 francs in interest apparently represented a surrender by Frenchmen of about 500,000,000 francs ($95,000,000) of their holdings of Italian securities. Similar changes were noted in respect to the coupons of the Turkish debt payable at Paris. The foreign markets came to the aid of the Paris bourse in distributing the obligations of the new French loans. In the case of the loan for three milliards the foreign subscriptions reached the fabulous amount of 26,050,195,054 francs ($5,000,000,000), while subscriptions in France were only 17,765,901,496 francs. The foreign subscriptions, however, were mostly from the great banking houses, which did not intend to hold the securities as investments, but came to the aid of their Paris correspondents in distributing the pressure of such a large demand for capital over the money markets of the world.* M.

* Leroy-Beaulieu, "*La Science des Finances,*" II, p. 230.

Say, who conducted this great transaction, summed up its scope as follows:*

"The year 1874 will not pass before it can be said that the five milliards of the loans are invested within the country and without the aid of the foreigner. As to the exchange operations undertaken by the French treasury and the composition of the supply of bills of four milliards and more which the treasury assembled, it may be said that the coupons of foreign securities held in France and the foreign securities exported have supplied a larger part, almost the whole, to the exclusion of the merchandise movement, which was almost evenly balanced, and the movement of the precious metals, which was not so considerable as might have been supposed and which furnished little beyond the direct shipment from the French treasury to Germany.

"The transaction was carried out as if the five milliards had been remitted to Berlin in French securities and Frenchmen had sent their savings to Berlin to buy back these securities, as they sent them before to Italy, the United States, Austria and Turkey to buy Italian, American or Turkish bonds, or the shares and bonds of Austrian railroads."

It is not surprising that negotiable securities perform such an important part in international exchanges and in distributing the pressure of sudden demands for capital and money, in view of the large share of the wealth of the world which they represent. The supply of metallic money in the world is about $11,000,000,000. The face value of the negotiable securities is not far below one hundred thousand millions of dollars ($100,000,000,000). A careful investigation made by M. Alfred Neymarck, under authority of the International Institute of Statistics, completed in 1897, put the value of the securities then quoted on European bourses at 446,000 millions of francs, or about $86,000,000,000.† This sum is subject to a deduction of about $8,000,000,000 for Germany, because gold and silver and other forms of wealth were included which were not negotiable securities, and to further deductions because certain securities appeared twice upon the same market;

* "*Les Finances de la France sous la Troisième République*," I, p. 440.

† "*La Statistique Internationale des Valeurs Mobilières*," p. 6.

but large additions should be made for the negotiable securities of Australia, the United States and other American countries, which are not quoted on European bourses, and for additional issues in all countries during the last two years. The railway capital of the United States alone, represented by stocks and bonds on June 30, 1897, was $10,635,008,074. Some of these bonds and most of the national obligations are included in the list of securities quoted upon European bourses, but a large proportion represent additions to be made to the figures of M. Neymarck. The issues of new securities throughout the world, after eliminating the conversions of old debts, were given by M. Georges de Laveleye in his annual computation in the "*Moniteur des Intérêts Matériels*" at 8,911,870,530 francs for 1897 and 8,902,776,660 francs for 1898, representing about $3,450,000,000 for the two years to be added to the totals obtained up to the close of 1896. The remarkable outburst of activity in trust combinations in the United States added more than $1,000,000,000 to the issues of securities within the first three months of 1899, and swelled the total issues of trust stocks for fifteen months to more than $4,000,000,000.* It is not possible to determine accurately how far these items should be added together, in order to obtain the existing volume of property represented by stocks and bonds, nor what proportion of the old and new securities and those issued within the last three years have ceased to represent value by the insolvency and dissolution of the corporations involved,† but it is evident from the figures given that the whole wealth of the world represented by securities cannot be far below the immense total of one hundred thousand millions of dollars.

* "United States Investor," April 1, 1899, X, p. 425.

† In England from the passage of the Limited Liability Act in 1855 to the close of 1895, no fewer than 39,911 companies were registered, but nearly three-fifths—21,550 out of the whole—are believed to be extinct.—Aubrey, "Stock Exchange Investments," p. 69.

The creation of negotiable wealth in the form of securities has proceeded at an astonishing pace within the present century and especially within the last half century. The issue of securities is not the creation of wealth, but represents the conversion of pre-existing wealth into negotiable form or the accumulation of scattered capitals for new processes of production and exchange. The number of securities quoted on the Paris bourse in 1789 was only seventeen,* and as late as 1815 the shares of only thirty stock companies were listed in London, twenty in Paris, and eleven in Berlin.† In 1897 the number of French securities admitted to the official bourse was 493, representing a nominal capital of 59,142,400,000 francs ($11,000,000,000), and the number of foreign securities was 236, representing French investments abroad of about 26,000,000,000 francs.‡ But Great Britain easily leads the world in the volume of her stock exchange business. The value of her securities, including £2,043,540,990 in foreign obligations held in Great Britain, was computed in 1895 at £7,246,902,726 ($35,000,000,000).

The rapidity of the creation of joint stock companies within the last few years is indicated by the statistics for a few leading countries where official records are kept. In Great Britain the applications for new capital, including some foreign loans placed upon the London market, were £152,807,000 in 1896, £157,289,000 in 1897, and £149,227,000 in 1898.§ In France the number of new charters for joint stock companies registered in the Department of the Seine alone was 1950 in 1896, 2097 in 1897, and 2248 in 1898. The capital specified was 558,582,209 francs in 1897

* Léon, "*La Coulisse et ses Opérations*," p. 24. A few others, like the shares of the General Insurance Company, were negotiated outside the bourse.

† Emery, "Speculation on the Stock and Produce Exchanges of the United States," p. 75.

‡ Théry, "*Valeurs Mobilières en France*." pp. 142–44.

§ London "Economist," December 24, 1898, LVI, p. 1855.

and 803,491,651 francs ($160,000,000) in 1898.* In Germany the number of new corporations was 182 in 1896, with a capital of 268,600,000 marks; 254 in 1897, with a capital of 380,500,000 marks, and 329 in 1898, with a capital of 463,600,000 marks ($115,000,000).† In Russia the stock companies organized from the beginning of the present century to the close of 1897 represented a capitalization of 1,768,555,000 roubles ($900,000,000), without including banks and railways, and about one-third of the applications were during the three years ending with 1897. The year 1895 witnessed organizations with capitals of 129,363,000 roubles; 1896, 232,640,000 roubles, and 1897, 239,424,000 roubles.‡ In the United States the creation of new stock enterprises prior to the trust mania of 1898 reached its maximum in 1890, when new stocks were listed on the New York Stock Exchange to the value of $437,992,330 and bonds to the value of $684,867,879.§

While this mass of transferable wealth affords a means of payment between individuals and widely separated markets which permits great economies in the use of money, the creation and transfer of such a mass of wealth in itself calls for the use of great sums in gold and banking credits. These demands, although temporary in their nature and involving only the settlement of differences, have sometimes almost exhausted the capacity of the money market. The scarcity of money in New York in 1890 made borrowing on securities difficult and many failures resulted from the impossibility of procuring the necessary loans.|| The incident brought home to the New York Stock Exchange the necessity of a clearing system for stocks such as was already in operation in many European markets. The first official stock exchange clearing house was founded at

* "*L'Économiste Européen*," March 10, 1899, XV, p. 306.

† "*Bulletin de Statistique*," February, 1899, XLV, p. 185.

‡ "*Bulletin Russe de Statistique*," July-September, 1898, V, p. 635.

§ Emery, p. 152.

|| Emery, p. 86.

Frankfort in May, 1867, and it was found that settlements involving $250,000,000 in securities could be made by the payment of $5,000,000 in currency. The primary feature of the stock exchange clearing houses is the setting off of sales of stock by certain brokers against purchases of the same stock by other brokers, so that the final balances only are delivered by the clearing houses. Several of the stock exchange clearing houses go further and settle the entire money balances between brokers.* The Berlin Exchange adopted the clearing system in 1869, the Hamburg Exchange in 1870, that of Vienna in 1873, and that of London in 1876. The peculiar organization of the Paris bourse has prevented the formation of a regular stock clearing house in Paris, but the same results are obtained by a voluntary comparison of accounts. The system went into operation at New York on May 16, 1892, and has worked with remarkable success.† The necessity of keeping bank deposits to cover the full payment for stock has been brought to an end and accounts are settled by the payment of the balances.

The use of securities in international transactions, for the settlement of obligations between countries which would otherwise have to be settled in gold or by movements of commodities, is accomplished chiefly by those classes of securities which have an international market. There are many securities of solid value which do not circulate widely on foreign markets, like the shares of co-operative banks and the bonds of mortgage companies. There are also many securities of the best class which are capable

* This is the New York method, and on the single day of January 23, 1899, there were sold 5,006,900 shares of stock valued at $350,900,000 by the transfer of only 735,000 shares and the payment of balances amounting to $724,500. In London, where money balances are not thus settled, the large volume of business four days later caused the announcement that "the settlement has been very difficult to arrange because of the magnitude of the transactions. The clearing house arrangements quite broke down, owing to the immense amount of stock absorbed by Wall Street."—"New York Evening Post," January 27-28, 1899.

† Alexander D. Noyes in "Political Science Quarterly," June, 1893, VIII, p. 260.

of use in international exchanges which have found so complete a market at home that they have not been employed largely abroad. Whether securities are international or not in their circulation depends to some extent upon accident. The debts of the strongest states are largely held at home, and there are international securities which are far less solid than some which lack this character. Some of the best obligations of strong governments play a part, however, on the international exchanges because their wide reputation and high value assimilate them more closely than the poorer securities to metallic money and because the large amount outstanding tends to make them obtainable on all markets. There is convenience, as Mr. Giffen says, in "a great mass of stock, like consols or French rentes, for the operations of a great market. *Ceteris paribus*, such stocks will stand higher than very similar stocks which are not in such masses." * Most of the securities issued by semi-civilized and undeveloped countries are found upon the international markets, because it is there that it is necessary for them to obtain the capital which is lacking at home. The international securities thus include the bonds of both strong and weak governments, the stock and bonds of certain railways which have sought their capital outside the country where they are constructed, and a few leading industrial obligations. The countries of Western Europe, through the bourses of London, Paris, Berlin, Frankfort, Brussels and Vienna, are the chief international markets, because it is there that the surplus capital of the world seeks investment. The New York market has until recently been almost barren of international securities, except those belonging to this class abroad, but representing American enterprises, because the great volume of American capital has been absorbed at home. Recent events, however, have accumulated a great surplus of loanable capital which is likely to seek investment in the

* "Stock Exchange Securities," p. 90.

securities of the undeveloped countries and in some of the international obligations which are quoted on European bourses.*

The variety of international securities is indicated by the increase of the number on the Paris market, where they are perhaps most numerous, from 136 in 1880 to 236 in 1897. There are found great quantities of Spanish and Cuban bonds, the obligations of the Austrian and Hungarian railways, the stocks and bonds of many industrial companies of Europe, Asia, Africa and Latin America, and the Russian government loans whose prompt absorption afforded proof of the sincerity of the recent outburst of French enthusiasm for a Russian alliance. Many securities are international almost from their nature. Such are the bonds of the French and Belgian railway syndicate guaranteed by the Chinese government upon the general revenues, and known as the Chinese Five Per Cent Gold Loan of 1898, placed upon the market in the spring of 1899,† and many similar loans for the equipment of the undeveloped countries; the Egyptian loans guaranteed by the Powers, which are quoted above par, and the bonds issued in 1898 under the guarantee of Great Britain, France and Russia for the purpose of restoring solvency to the finances of Greece.‡ The obligations of prosperous states generally tend to return to the issuing country, because they are more highly prized there than abroad, and bring slightly higher prices. This influence has to be reckoned with by financiers in making conversions and in adopting a new monetary standard.§ But some of the international securities have practically no domicile except upon European bourses and are employed there as substitutes for money and the counters in the game of speculation arising from the conflicting

* The spring of 1899 found negotiations in progress in New York for floating portions of loans offered by Russia, Japan, Mexico, and Haiti.

† "*Economiste Européen*," April 14, 1899, XV, p. 461.

‡ *Vide* New York "Bankers' Magazine," March, 1898, LVI, p. 380.

§ *Vide* the author's "History of Modern Banks of Issue," p. 229.

phases of the political and economic situation. How they flit thus from one market to another under the influence of arbitrage transactions is described by Professor Edmond Théry:*

"Spanish exterior four per cents are at once negotiable in Paris and London. If, for any reason whatever, the quotations of the exteriors at Paris are above the London quotations and if the difference, combined with the quotations for checks upon London,—that is, the rate of exchange between French and English money,—is sufficient to cover the cost of an arbitrage operation and leave an appreciable benefit, arbitrage speculation in Paris will result in the sale of the exteriors at Paris, for the purpose of buying there an equal sum in checks payable at sight on London and buying at the same moment in London the quantity of Spanish exteriors sold at Paris. Upon liquidation, if the operation is not traversed in the interval by an adverse arbitrage, the Paris arbitragist will take the exteriors purchased at London, pay for them with his check and deliver them at Paris, where they will be paid for in French money."

The best class of international securities, including most of the obligations of sovereign states, are payable in gold, and the interest coupons are honored at leading banking houses on the same date in the great money markets of Europe. Thus, the coupons of the Russian national debt are payable in francs at Paris, in pounds sterling at London, in florins at Amsterdam, in marks at Berlin, and in gold roubles at St. Petersburg. This fact constitutes them an international money of the highest character, and in the language of Professor Théry, "The great credit societies and banking houses having branches or correspondents in these different cities are able to utilize them as true bars of gold, according to the respective position of the exchanges.†

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* "*Valeurs Mobilières en France*," p. 137.
† "*Valeurs Mobilières en France*," p. 140.